REMARKS

These Remarks are in reply to the Office Action mailed December 11, 2009. Claims 1, 2, 5-12, 15, 16 and 19-29 were pending in the Application prior to the outstanding Office Action. Claims 1, 2, 10, 12 and 22 are currently being amended, and claim 5, 6, 15 and 16 are being canceled. Accordingly, claims 1-2, 7-12 and 19-29 remain pending for the Examiner's consideration, with claims 1, 10 and 22 being independent. Support for these amendments is explicitly and/or inherently provided in the application as originally filed, and thus, no new matter is being added. Applicants respectfully request that the outstanding rejections be reconsidered and withdrawn in view of the remarks below.

I.   Summary of Prior Art Claim Rejections

Claims 1, 2, 7, 10-12, 19 and 22-29 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 4,841,828 to Suzuki (hereafter referred to as "Suzuki") in view of U.S. Patent No. 5,023,825 to Luthra et al. (hereafter referred to as "Luthra"), U.S. Patent No. 5,471,411 to Adams et al. (hereafter referred to as "Adams") and U.S. Patent No. 4,727,505 to Konishi et al. (hereafter referred to as "Konishi").

Claims 5, 6, 15 and 16 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Suzuki in view of Luthra, Adams and Konishi and further in view of U.S. Patent No. 5,928,313 to Thompson (hereafter referred to as "Thompson").

Claims 8, 9, 20 and 21 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Suzuki in view of Luthra, Adams and Konishi and further in view of U.S. Patent No. 6,411,333 to Auld et al. (hereafter referred to as "Auld").

(a discussion of the claims begins on the next page)

II.   Discussion of the Claims

Claim 1 has been amended to include the features of dependent claim 5 (which has accordingly been canceled) as well as other features to further distinguish claim 1 from the applied references.   Claim 1, as amended, is reproduced below for the convenience of the Examiner.

1.   (Currently Amended) A method comprising:

(a)   storing a plurality of independent sets of filter coefficients in a memory, wherein each set of filter coefficients defines a different polyphase filter function, wherein each of the different polyphase filter functions would result in at least some modifying of a signal if the signal were filtered in accordance with the polyphase filter function, and wherein each of the different polyphase filter functions would result in modifying of a signal in a different manner than the other polyphase filter functions;

(b)   storing a value in a filter selection register;

(c)   selecting a single one of the independent sets of filter coefficients based on the value stored in the filter selection register;

(d)   receiving an audio input signal including a plurality of samples;

(e)   estimating a sample rate of [[an]] the audio input signal;

(f)   interpolating the single one selected set of filter coefficients, in dependence on the estimated sample rate of the audio input signal, to thereby produce interpolated polyphase filter coefficients; and

(g)   convolving the produced interpolated polyphase filter coefficients with the samples of the audio input signal to produce a filtered audio output signal that differs from the audio input signal regardless of which single one of the sets of filter coefficients is selected;

wherein said selecting the single one of the independent sets of filter coefficients at step (c) is performed prior to receiving the audio input signal at step (d), independent of the audio input signal received at step (d), and independent of the filtered audio output signal produced at step (g); and

9

wherein the same single one of the sets of filter coefficients selected at step (c) is used at steps (f) and (g) to produce the filtered audio output signal produced at step (g).

As mentioned above, claim 1 was rejected as allegedly being unpatentable based on a combination of four (4) references, i.e., Suzuki in view of Luthra, Adams and Konishi. To reject claim 5, a further reference was added, i.e., Thompson. Thus, the Office Action combined five (5) references to reject many of the features of claim 1 as now amended.

As explained in MPEP § 2142

> To reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences," conduct the search and evaluate the "subject matter as a whole" of the invention. The tendency to resort to "hindsight" based upon applicant"s disclosure is often difficult to avoid due to the very nature of the examination process. However, *impermissible hindsight must be avoided* and the legal conclusion must be reached on the basis of the facts gleaned from the prior art. (emphasis added)

Applicants respectfully assert that impermissible hindsight has been relied upon to pick and choose features from five (5) separate references to allegedly obviate the claimed invention. The reasoning used in the Office Action for combining the references involve "the benefit of increasing efficiency in a sample rate converter", "the benefit of varying the output samples of the processed signal", "in order to process signals containing a large number of high-frequency components, as well as providing a convolution arithmetic circuit suitable for real-time processing of digital signals" and "the benefit of utilizing the hardware fast enough to process incoming sample in real time". None of the reasons for combining the five (5) separate references relate to one another, which leads Applicants to believe that one of ordinary skill in the art viewing these five (5) separate references would not have thought to combine them in the manner

10

suggested in the Office Action. Rather, it appears that Applicants disclosure and claims were used as a roadmap for the Examiner picking and choosing features from the five (5) separate references, which is not permissible.

Further, Applicants have added further limitations to claim 1 to further distinguish the claimed invention from the five (5) references. For example, claim 1, as amended, now specifies that:

"said selecting the single one of the independent sets of filter coefficients at step (c) is performed prior to receiving the audio input audio signal at step (d), independent of the audio input signal received at step (d), and independent of the filtered audio output signal produced at step (g); and

wherein the same single one of the sets of filter coefficients selected at step (c) is used at steps (f) and (g) to produce the filtered audio output signal produced at step (g)."

In the Office Action, Thompson was relied upon to allegedly teach the features of dependent claim 5, which are now included in claim 1, which relate to storing a value in a filter selection register, and selecting a single one of the independent sets of filter coefficients based on the value stored in the filter selection register. At column 8, lines 11-14, Thompson states that "the value stored in the coefficient set selection register 610 is utilized to select the appropriate coefficient set from the coefficient memory 326." However, it is clear from the previous and following sentences of Thompson, and the Table at the top of column 10 of Thompson, that the value in the "coefficient set selection register 610" of Thompson is continually changing on a sample by sample basis. For example, column 7, line 61-column 8, lines 11 states:

The coefficient selection apparatus 600 includes a coefficient ratio register 602 that stores a coefficient ratio value. The coefficient ratio value is supplied to an adder 604 by the coefficient ratio register 602. Preferably, the coefficient ratio value is a ratio of integers (M/L) (which is the inverse of the scaling ratio). The output of the adder 604 is supplied along with a value stored in an initial coefficient ratio register 606 to a multiplexer 608. The value stored in the initial coefficient ratio register 606 is an initial

11

value utilized to obtain the initial (first) coefficient set from the coefficient memory 326. ***The multiplexer 608 selects the value from the initial coefficient ratio register 606 during initialization to obtain the first coefficient set, and thereafter, selects the output from the adder 604 to obtain the subsequent coefficient sets. The output of the multiplexer 608 is stored in a coefficient set selection register 610.*** More particularly, the value stored in the coefficient selection register 610 is a fractional portion of the output of the multiplexer 608. (emphasis added)

Further, column 7, line 14-19 of Thompson states:

The value stored in the coefficient set selection register 610 is also supplied as an input to the adder 604 as illustrated in FIG. 6. ***Hence, the selection of the next subsequent coefficient set is achieved by adding the coefficient ratio value stored in the coefficient ratio register 602 and the value stored in the coefficient set selection register 610.*** (emphasis added)

These, and other portions of Thompson, make it clear that the contents of Thompson's coefficient set selection register 610 is continually changing, dependent on an input signal, and also dependent on an output signal. Accordingly, it is clear that Thompson does not teach or suggest that "said selecting the single one of the independent sets of filter coefficients at step (c) is performed prior to receiving the audio input signal at step (d), independent of the audio input signal received at step (d), and independent of the filtered audio output signal produced at step (g); and wherein the same single one of the sets of filter coefficients selected at step (c) is used at steps (f) and (g) to produce the filtered audio output signal produced at step (g)", as required by claim 1, as amended. The other four (4) references used in the rejection of claim 1 do not teach or suggest these deficiencies of Thompson.

For at least the reasons specified above, Applicants respectfully request that the rejection of claim 1 be reconsidered and withdrawn.

Claims 2, 7-9, 24 and 27 depend from and add additional features to claim 1. Applicants respectfully assert that these claims are patentable for at least the reason that they depend from claim 1, as well as for the features that they add.

Claim 10, as amended, is believed to be patentable over the cited references for similar reasons to at least some of the reasons discussed above with regards to claim 1. Accordingly, Applicants respectfully request that the rejection of claim 10 be reconsidered and withdrawn. **Claims 11, 12, 19-21, 25 and 28** depend from and add additional features to claim 10. Applicants respectfully assert that these claims are patentable for at least the reason that they depend from claim 10, as well as for the features that they add.

Claim 22, as amended, is believed to be patentable over the cited references for similar reasons to at least some of the reasons discussed above with regards to claim 1. Accordingly, Applicants respectfully request that the rejection of claim 22 be reconsidered and withdrawn. **Claims 23, 26 and 29** depend from and add additional features to claim 22. Applicants respectfully assert that these claims are patentable for at least the reason that they depend from claim 22, as well as for the features that they add.

III.   Conclusion

In light of the above, it is respectfully requested that all outstanding rejections be reconsidered and withdrawn. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge the required fees and any underpayment of fees or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this reply, including any fee for extension of time, which may be required.

Respectfully submitted,

Date: May 11, 2010   By: /Jeffrey R. Kurin/
                                              Jeffrey R. Kurin
                                              Reg. No. 41,132

Fliesler Meyer LLP
650 California Street, 14th Floor
San Francisco, California 94108
Telephone: 415/362-3800
Facsimile: 415/362-2928
Customer No. 23910

13